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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,083	08/11/2006	Masaru Maruo	028359-00004	5863
4372	7590	03/08/2010		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER SALONE, BAYAN	
			ART UNIT	PAPER NUMBER
			3726	
			NOTIFICATION DATE	DELIVERY MODE
			03/08/2010 ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

# Office Action Summary

## Application No.

10/589,083

## Applicant(s)

MARUO ET AL.

## Examiner

BAYAN SALONE

## Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date 08/11/2006

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Japanese Patent Application Publication No.S63-93530), in view of the RVDT-Based Draw Wire Position Transducer made by Firstmark Controls (<http://www.firstmarkcontrols.com/pmc0602.htm>).
3. Regarding Claims 1 and 2, AAPA discloses a part positioning apparatus and method for positioning a part in relation to a part fitting object, that comprises a movable table for holding the part to be fitted to a bottom surface of the part fitting object (work), a relative position detecting means (television camera) for detecting a relative position of the movable table with respect to the work, a table positioning means for moving, based on a signal from the relative position detecting means, the movable table within the same imaginary plane so as to position the movable table in a predetermined relative position With respect to a predetermined position of the bottom surface of the work, a table lifting means for having the movable table moved up and down under the work, and a part assembling means, mounted on the movable table, for fitting the part

held by the table lifting means to the bottom surface of the work under the lifted (Page 1 of the Specification, Lines 13-23).

4. AAPA does not disclose a method comprising the steps of: setting on said part fitting object an engaging means provided on a tip end of a wire member which is possible to be pulled out and wound up; detecting a pulled-out length and an existing location of said wire member and moving said self traveling machine to eliminate relative positional discrepancies between said part fitting object and the part; fitting the part to said part fitting object in the state that the positional discrepancies are eliminated; and after fitting the part to said part fitting object, removing and retrieving said engaging means from said part fitting object or an apparatus comprising: an engaging means being provided on a tip end of a Wire member so as to be set on said part fitting object; a sensed member for accommodating said wire member in such a state as to be pulled out and wound up; a first sensor for detecting a pulled-out length of said wire member when said engaging means is set on said part fitting object; or a second sensor for detecting an existing location of said wire member when said engaging means is set on said part fitting object.

5. It is well known in the art that draw-wire sensors are devices used to detect and measure linear position and velocity using a flexible cable and a spring-loaded spool; that are easily installable in tight areas, work efficiently in harsh or extreme environments and can be used in a wide variety of applications (i.e. industrial factory automation and automotive testing). Firstmark Controls makes a draw-wire sensor (RVDT-Based Draw Wire Position Transducer) comprising: an engaging means being

provided on a tip end of a wire member (measuring cable) so as to be set on a respective object; a sensed member for accommodating said wire member in such a state as to be pulled out and wound up; a first sensor for detecting a pulled-out length of said wire member when the engaging means is set on the respective object and a second sensor for detecting an existing location of said wire member when said engaging means is set on the respective object. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the apparatus and method of the AAPA by replacing the camera sensors with multiple draw wire sensors similar to the sensors produced by Firstmark Controls to measure the position of the part fitting object relative to the work piece, for the benefit of monitoring the actual position of the workpiece and providing precise measurements to ensure the proper alignment of the part to the workpiece.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAYAN SALONE whose telephone number is (571)270-7739. The examiner can normally be reached on M-Th, 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571)-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BAYAN SALONE/  
Examiner, Art Unit 3726

/DAVID P. BRYANT/  
Supervisory Patent Examiner, Art Unit 3726